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Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Subject: Opposition to NextNav Petition for Use of UHF Band (WT Docket No. 24-240, RM-11989)

Dear Commissioners,

I am writing on behalf of GrowFlux, Inc., an agricultural controls, energy, and sensing solution provider, to express our strong opposition to the NextNav petition requesting the reconfiguration of the 902-928 MHz band for its positioning, navigation, and timing (PNT) services.

Importance of the 902-928 MHz Band for Agricultural Innovation

The 902-928 MHz band is critically important for unlicensed wireless communications, especially in challenging connectivity environments such as agriculture. This frequency band enables robust, long-range communication necessary for various applications in agriculture, including energy efficiency, automation, and wireless sensing.

The agricultural sector in the United States comprises tens of thousands of small producers who face increasing economic pressures due to rising costs and price competition. These producers rely on innovative technologies to increase efficiency, conserve energy, and collect data essential for making informed decisions. Our proprietary 802.15.4 wireless mesh network, operating in the 902-928 MHz band, plays a crucial role in delivering these capabilities by providing reliable connectivity even in remote and obstructed environments.

Use Cases at Risk

Our company provides a range of products that utilize the 902-928 MHz band, including:

- **Energy Efficiency Solutions:** In greenhouses and indoor farms, our wireless controls optimize the largest electricity loads, particularly those related to horticultural lighting. As the number of greenhouses in the United States increases, utility companies face challenges in meeting the growing demand on the grid. Our energy efficiency solutions, operating on the 902-928 MHz band, are crucial for both our agricultural customers and utility providers. The reliability of these solutions is essential for managing significant energy loads and mitigating impacts on the electricity grid.
- **Automation Solutions:** Our systems automate key agricultural processes such as irrigation, fertigation, lighting, ventilation, and other essential inputs. In agriculture, there is a need for reliable, mission-critical connectivity, especially in control applications where livestock or high-value crops could be at risk if an automation system fails. As automation becomes increasingly vital to agricultural efficiency, wireless controls are essential. The capital costs associated with hard-wired control systems are often prohibitive or impractical, making wireless solutions a more feasible and cost-effective choice for many operations.
- **Wireless Sensors:** Our sensors deliver real-time data on crop conditions, microclimates, and precise weather conditions, providing farmers and controls with critical real time insights. We are increasingly implementing edge-based decision-making within our wireless networks, enabling direct communication between wireless sensors and control systems that regulate agricultural inputs. This approach adds significant value for our agricultural customers by reducing the cost and complexity in high reliability control systems. Any reduction in bandwidth in the 902-928MHz band will degrade these features.

These products are currently installed on over 500 farms across the United States. The proposed changes threaten to significantly disrupt the operation of these devices, which could impair agricultural productivity and efficiency. Moreover, we have tens of thousands of products in inventory, all configured for the 902-928 MHz band, with distributors and integrators across the country. The cost and logistical challenges of modifying these products would impose a substantial burden on both our company and our customers.

Impact of Reconfiguration

Should the proposed reconfiguration be approved, it would severely limit the available spectrum for our existing operations, potentially rendering our products inoperative or unreliable. The cost to retrofit or replace devices already deployed would be prohibitive, further straining an industry already under economic pressure. Additionally, reducing the usable bandwidth for unlicensed operations in this band would degrade the performance and reliability of our solutions, undermining the technological advancements our customers depend on.

Conclusion

Given the extensive use of the 902-928 MHz band by the agricultural sector and the severe consequences of reallocating this spectrum, we urge the FCC to reject NextNav's petition (WT Docket No. 24-240, RM-11989). Maintaining the current spectrum allocation is vital to sustaining the innovative applications and efficiencies enabled by this band, which are essential to the future of agriculture and food production in the United States.

We trust that the FCC will recognize the importance of preserving the unlicensed use of the 902-928 MHz band for agricultural innovation and reject the NextNav petition.

Sincerely,

Eric Eisele

CEO
GrowFlux, Inc.